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LAWS OF ASSOCIATION IN ORNAMENTAL GARDENING.

BY A. D. G.

Our country abounds with persons intent upon learning and practicing the various arts of rural embellishment. They have read of velvet lawns, leafy groves and thickets, groups and masses, vases and statues, and fountains; but they have no definite conception of what they wish to accomplish; much less do they know how to construct the scenes dimly floating in their imaginations. They do not know when to cut down a tree, or where to plant one; where to clear up shrubberies, or [illegible] to plant them; where, or when, or how to plant evergreens or deciduous trees, singly or in groups.

It is noticeable, too, with most writers on this subject, that it is made the highest end of art to produce a scene which shall be simply beautiful, or picturesque, or grand and imposing. The appeal is to the eye rather than to the mind. But may we not proceed a step further? May we not so plan and plant our grounds as both to awaken and to express some of the highest and best sentiments of the soul? Each scene will of course demand its own expression. It may be dignity, or grandeur, grace, cheerfulness, tranquility, security. The Creator, it is believed, has given to each vegetable structure its own expression, and these, variously combined, may be used to typify some of the noblest ideas and purest emotions. And the artist who knows how to interpret nature can set about the creation of new scenes, confident of success in his work. He will not be satisfied with simply adorning his grounds with arbors, statues, grottos, and other works of art, or with planting trees, shrubs and gay flowers; he will desire to go beyond the senses, and to address the memory and imagination, the poetical and moral sentiments. If one tree is really beautiful, he will plant it for the sake of its beauty. If another, though lacking in beauty, yet appeals in some way to man's higher nature, he will plant it for that reason. A *quasi* amateur once said he would not plant a certain tree in his grounds "because it was not *fashionable*." The thoughtful gardener will not inquire

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what is fashionable, but what is truly fit and beautiful, and what is interesting from its expression and for the associations connected with it.

This principle of association in its relation to ornamental gardening deserves more thought than it is wont to receive; and we wish now to dwell a short time upon it. No small share of the interest we feel in all objects, times and places, arises from the operation of this principle. The rusty coins which the antiquarian treasures up, because they bear the image and superscription of ancient kings, and commemorate important events in history, would not be received at the bank. The relics of old Egypt and Assyria, obtained at great expense and stored up in museums with pious care, what are they worth more than the lumber of a thousand garrets? Are the waters of the Jordan and the Tiber better than those of the Chippewa River or the Great Pedee? Of what value is a fragment of Plymouth Rock above any other piece of granite—or a branch from the Charter Oak, or from the trees overhanging Washington's tomb? The chief interest of our national holidays, of our annual State festival, and our various domestic anniversaries, does it not lie in the memories they revive? And the home of our childhood—what makes it the home it is, separating it from all other places on earth, hallowing its soil and endearing its very walls, unless it be this principle of association?

Many trees and plants are interesting for a similar reason. They may or may not possess the element of beauty; yet, if they have become linked with historical facts, or if they symbolize poetical and moral sentiments, or in any way deeply affect the mind and heart, they are worthy of special regard. To illustrate our meaning, let us allude first to the Cedar. This was peculiarly the tree of Palestine, bristling along the ridges of Lebanon, and crowning the hills around the Holy City. The temple and the palace were built of this wood: "All was cedar; there was no stone seen." It was believed that "God loved it more than any other tree." The Palm-tree has both a sacred and classical importance, having been used from the earliest times as an emblem of integrity, constancy, fruitfulness, patience and victory. So of the Olive-tree: it is associated with the subsidence of the flood, and with important events in the life of the Saviour. It has always been a token of peace.

Unlike those we have just named, the Oak is a tree of all climes. Under this, Abraham spread his tent at Mamre. Under an oak, Joshua set up the tabernacle of Jehovah for divine worship. Throughout all the East, no spot was more desired for a burial-place than the shade of an oak. In Greece, it was

> "Jove's own tree,
> That held the woods in awful sovereignty."

In England, it has been from the first a national tree, flourishing around her cathedrals and baronial halls, and imparting grandeur to her parks and hunting-grounds. Her navy proudly sails in "oaken walls"; her army fights with "hearts of oak." The Elm is not without classical associations. The graceful white elm of this country surpasses all other species in beauty, and has been so universally planted as to have become, with the maple, almost a national tree. It is associated especially with the older towns of New England, with their training fields, their village streets and ancient farm-houses.

Perhaps no plant is more suggestive than the Vine. Originating in Persia, it found its way very early into India, Greece, Sicily, and all the temperate regions of the Old World. One has observed that "the classics seem to have been written under its shade; their pages exhale the sweet odor of its fruit." It is mentioned frequently in the Old and New Testaments, as furnishing a pleasing shade, a healthful fruit, and an invigorating and wholesome beverage. It is often used as a symbol of peace and plenty. Our Saviour has for ever hallowed it by styling himself "The Vine,"

and by constituting the juice of its clusters a perpetual emblem of his love.

But we need not speak at length of other trees and plants in their mythological or historical relations. Some trees have a marked expression which renders them suggestive, and others have poetical and moral associations which are worthy of notice. Evergreens, as a class, suggest ideas of protection, seclusion, shelter, of smiles amid surrounding gloom, of constancy amid changes, of life amid desolation and death. Deciduous trees are more varied in expression. The maples are comfortable and well-to-do; the white ash is neat and trim, and in the autumn robes itself in royal purple; the elm is gracefully dignified; the Lombardy poplar is all aspiration; the aspen is timidity, trembling at every breeze; the oak is strength and sturdy endurance; the willow is affection, bending over the dust of the departed.

Nor are flowering plants without expression. Where is there gayety and vanity, if not in the tulip and poppy? or purity and modesty, if not in the lily and primrose? or foppery and ostentation, if not in the cockscomb and peony? Every eye sees deceit in the monkshood, immortality in the amaranth, hope even in misery in the bachelor's button, industry in broom-corn. The snow-drop and crocus are friends in the storms of adversity; unconscious beauty is in the daisy, ambition in the hollyhock, woman's affection and fidelity in the clinging ivy and honey-suckle, delicacy in the lily of the valley, unchanging love in the myrtle, remembrance in rosemary, domestic virtues in sage, and substantial worth in thyme.

Flowers are the poetry of the vegetable kingdom. They address our most delicate sentiments, and awaken our tenderest emotions. They charm us by their richness of form, color and fragrance. Their very fragility attracts us; it touches our sympathy and makes us love them with almost human affection. If proof were needed of the firm hold which they have gained upon the universal heart, we might instance the fact that they are used, in one way or another, to adorn all our daily life. They are woven into our carpets, garments, window-hangings, and nearly all domestic fabrics. Flowers are sculptured in marble, carved in wood and ivory, embossed in gold and silver, cast on our stove-patterns, stamped on our wall-papers, engraved in our books, and painted everywhere. Children love them almost instinctively; maidenly beauty delights to twine them in her hair; they adorn the bride for her husband; they cheer the chamber of sickness; they grace the banquet-table, and are fitly strewn upon the grave.

In respect to their moral associations, it may suffice to mention that the pages of Holy Writ abound in floral imagery, symbolizing man's frailty and his resurrection, representing human virtues and God's providential care. They "typify the benign intent of the universe." Springing up, as they do, on all the face of the earth, they speak of the boundlessness of God's love: they show that He is not satisfied with making man's abode simply endurable, but would have it a paradise of delight.

Trees and plants have domestic associations also. Not to speak now of fruit-bearing trees and vines, the locust, maple, elm and balsam-fir, the lilac, rose and honey-suckle have been so long planted about every country-house as to form almost an essential part of a rural homestead. Some of the pleasantest recollections of childhood cluster around these familiar objects. But, aside from long established associations, there are others which grow up in one's individual experience, and to which every passing year gives new sacredness and power. When a man sets out to establish a permanent home, the land, timber, bricks and stones are only a certain number of acres and a certain amount of building materials, costing so many dollars. But as soon as he enters upon the construction of his house, and the arrangement of his

grounds, the land and lumber begin to increase in value. The apartments, which he plans with care, seeking to make them attractive to his family and guests, the furniture which he selects for their comfort and pleasure, are all worth more than the materials of which they were made. And every year, as it adds its varied experience to the history of the household, only heightens their value. So too, in arranging his garden and grounds, if he does it with zeal, embodying his own individuality in it, he finds that the object of his labor is the object of his increasing love. Let him but plant a tree with his own hands, he at once becomes attached to it. Let him brace it against the riotous winds, water its thirsty roots, cleanse it of insects, and give it all the care it requires, and no sooner will its roots shoot out and grasp the soil, than his affections will fasten upon it and upon the very earth in which it grows. He will watch its expanding leaves with increasing love, and every year he will take new delight in its spreading boughs and thickening shade. Other trees added to his collection, from time to time, will add new objects of interest. In planting this, a darling child held it upright, or with his little spade tried to help, but hindered the work, and, when all was finished, named it *his* tree. That was the wife's choice, and in its early growth was nurtured by her tender care. This came from the old homestead, the gift of a venerated father. Yonder shrub was presented by a friend, and this flowering plant was the gift of a beloved sister now walking amid the celestial gardens. How can one live and move among such trees and plants, and not feel that they possess a value beyond price? Each has a history of its own, and is bound up with his history. Nay, each has a life and soul, to which his own heart is linked by the strongest ties.

[*Concluded in our next.*]

DESIGNS IN RURAL ARCHITECTURE—A COUNTRY SCHOOL-HOUSE.—No. 17.

BY G. E. HARNEY, COLD SPRING, N. Y.

We present at this time a sketch of a country schoolhouse, of suitable size and accommodation for about fifty pupils, of both sexes.

Enough has been already said of the great importance of making such structures comfortable and attractive; of selecting for them the very best situations the district affords; of giving them ample grounds, and carefully beautifying them with trees, and shrubbery, and flowers; and of supplying every improvement for the convenience and benefit of instructor and pupil; and the good effects of such hints may be seen plainly all about us; but there is great room for improvement yet, particularly in districts remote from the larger towns and villages, where the people are mostly, or all, hard-working farmers, who have little time or inclination to study matters of architectural improvement, and where architecture, as a profession, has hardly, as yet, exerted any special influence. Horticultural and agricultural publications have done a great deal, however, to improve the popular taste; in fact, the whole credit is theirs, for it is to them solely, and to this very magazine—The Horticulturist—principally, that we owe the first awakening; and it will be to their efforts in the future that we shall look for a continuation of these improvements, having a more general circulation, and a more intimate relation with the rural population than other publications.

It is to meet the requirements of such localities that we present this design; and we think it will recommend itself by its simplicity and convenience.

It is a plain building of wood, comprising

a central portion and two wings, one on each side, and lower by three feet. The main building measures twenty-one feet by forty-two, and the wings twelve by seventeen each. The principal schoolroom measures twenty feet by thirty, and is twelve feet high to the spring of the ceiling, and seventeen feet high in the centre of the room, the ceiling for a portion of the way following the slant of the rafters, and the principal rafters and braces projecting out so as to show from below. The walls of this room are wainscotted up to the level of the window-sills —four feet from the floor—with narrow ceiling boards, and above that, together with the ceiling, are finished off with a rough sand stucco finish.

The wood-work should all be stained, and the walls tinted some soft neutral tint —gray, or cream, or pearl color.

The windows are all sash windows, double hung for purposes of ventilation; and, in addition, there are two ventilating shafts rising from the floor through the attic, and terminating in the ventilator on the ridge of the main roof. These shafts have openings near the floor and ceiling, with arrangements for opening and shutting at will. They are made of smoothly-planed, well-jointed pine boards, and measure each sixteen inches square inside.

FIG. 103.—*Perspective.*

In order to keep up the circulation, and to supply cool air from outside, a shaft is introduced running along under the floor, and terminating at the platform on which, in winter, the stove, or heating-apparatus, will stand, and from this distributed into the room by numerous small holes in the riser of the platform.

We consider the simplest methods of ventilation the best, and the above will be found both simple and effective. The great desideratum is to provide means for the discharge of a certain quantity of vitiated air, and to supply its place by the same quantity of pure air, properly warmed in winter. To make the discharge more effective, the stove-pipe may be carried up in connection with one of the shafts, rarifying the air, and making the upward current stronger, but in ordinary cases this will be hardly necessary.

There are two entrances to this house, one for boys and one for girls. Both entries are ten feet square, and are in the main building, opening directly into the schoolroom.

The wing on the right is a class-room, and that on the left is designed for wood and coal, and for a wash-room, if such be considered desirable.

The entries, instead of having hooks for

FIG. 104.—*Ground Plan.*

clothing, have each a sufficient number of boxes, or shelves divided up into compartments of about two cubic feet each, ranged along the sides, and carried up in three or four tiers. These boxes are all numbered, and each scholar has one for his exclusive use; being provided with a duplicate number as a voucher, there is no opportunity for contention as to ownership, no losing or abusing of hats and shawls, and dinner-pail. The method has been tried, and found much preferable to the old arrangements of hooks, particularly for the smaller scholars, and those coming from a distance who bring their dinners.

The two porticos measure eight feet by ten; the windows have all broad hoods and brackets; the gables have heavy finials, and the ridge is surmounted by a large ventilator. The roofs are covered with slates, and the walls are painted two or three coats of oil paint.

The cost, at present prices of labor and materials, would be about $2,500.

GRAPES AT AVON POINT.

BY M. H. LEWIS, SANDUSKY, OHIO.

THE map of Ohio indicates some irregularity in the south shore of Lake Erie, along the northern part of Lorain County. Here, twelve miles north of Elyria and fifteen west of Cleveland, a wide reach of land, known as Avon Point, because of its underlying shale formation, has most successfully resisted "the wear and tear of wind and tide."

In shape it resembles a trapezoid. The shorter of its parallel bases, three miles in length and distant about three miles from the main land, is the head-shore line.

Having just returned from a delightful visit at the Point with E. Boyd, Esq., whose summer residence is immediately upon the shore at the farthest point lakeward in all the region, I propose a simple statement of what has been done there in behalf of the "blessed grapes."

Three years or more since, Mr. Boyd had his attention directed to grape culture, and to this locality as especially adapted to such an enterprise. Most of the land along Avon Point, as it abuts upon the water, forms an embankment of ten and oftentimes twenty feet in height. The soil is a heavy clay resting upon a shale formation five or six feet below. In the shale, the salts sulphuret of iron and sulphate of alumina seem to abound. The presence of iron is sometimes manifest by the red tinges in the clay, though generally the latter is of a light color. The surface is slightly rolling, and at frequent intervals furrowed out by brooklets from the interior, making their way on the shale with most of the surface water down to the lake. The aspect of the country seems to be south and south-east. Having satisfied himself that the lacustine influences, soil and lay of the land were just such as to please even the coy and fastidious Catawba, he bought largely of the farmers, who were all unsuspecting of the wealth of unassimilated wine pabulum, ground up and pushed thither in the long ago of the

glacial period and everywhere contemned as "white-bean" soil. Think of it, vineyardists of Sandusky and the Islands, hundreds of acres of the best Catawba land purchased within a few years at $40 per acre!

He interested other parties at Detroit, Columbus, and especially A. W. Kellogg, Esq., of the well-known firm of Kiggins and Kellogg, New York city, and they have now secured in all many hundred acres in excellent locations. Ten acres of Catawbas planted three years ago are just coming into bearing. The wood is stocky and short-jointed, and the foliage is particularly remarkable for its deep green color — the leaves looking firm and healthful almost as Concord.

The vines seem to have been faithful in setting fruit plentifully, but here as in most places on the south shore, to the west of Avon at least, the clusters are imperfect from a heavy fall of rain just at blooming times, which prevented complete fertilization. His vineyard is trellised with posts and wires. By the way, Mr. Boyd has adopted a novel mode of setting posts. He has a pile-driver which four or five men can easily manage. With this he is enabled to drive posts into the earth many times as fast and much more firmly than the same working force could put them in by the ordinary method.

Mr. Boyd is eminently a practical man, not a horticulturist by profession, not much given to book-farming, though he does not by any means ignore the vast amount of valuable information in the horticultural literature of the day, but has traveled much, has visited repeatedly all the great centres of grape growing East and West, and always with his "eyes and ears wide open." Hence he has so far been quite successful. Early in the fall of 1865, he secured over 50,000 selected Catawba cutting roots and had them stored in sand in a dry cellar until spring planting. He bought at $25 per thousand, and thereby made a clear gain, as it proved, of more than $1,200; for in March following the same class of roots were very scarce at $50 per thousand. Early, too, in the fall, he subsoiled his ground, using a subsoil stirer, to a depth of sixteen inches, and as he could not get it underdrained, he networked it with surface ditches. In the spring of 1866, after the thorough work of that most silent and indefatigable of pulverizers, Jack Frost he cross-ploughed and subsoiled again. He had the foresight also to engage a superior vigneron to superintend the whole grape interest—an americanized German of many years' experience on Kelly's Island, and he was every way wisely and fully ready for the stupendous task of planting at one time over 60 acres of vineyard.

The advancing summer proves the undertaking a complete success. Not one vine in 200 on an average is lost. The growth is healthful and vigorous. The cultivation has been admirable, scarcely a weed to be seen, and the soil, which usually bakes to stony hardness and cracks in great chinks, everywhere about the young vines seems to be mellow to a good depth. The rows are eight feet apart, straight as human hand can make them, and the vines seven feet apart in the row. This first year he can cultivate both ways. The posts and wires will run north and south. This autumn twenty or thirty more acres will be prepared in like manner—a portion to be set with roots at once, and the remainder the succeeding spring. Four or five Englishmen, adepts in their calling, are hard at work putting in three feet underdrains at twenty and twenty-five feet distances through the young vineyards of this last spring. Two inch circular tile are used and first covered with hay or straw before the drains are filled up. In fine, Mr. Boyd and his friends have made a great venture, but their well-founded confidence in their locality and soil, their *grande* confidence, as the Frenchman termed it, in American grape culture, their liberal use of capital, and intelligent employment of all the means to ensure success which recent experience has anywhere es-

tablished, make them sanguine of the final result and certainly entitle them to the sympathy and even the gratitude of all their co-workers in this broad field of industry.

I might add that they command fine sites for wine-cellars, one of which is already projected, and that they contemplate also building a tug to facilitate a heavy prospective trade with Cleveland.

Mr. Boyd's agricultural neighbors have some time since rubbed their eyes wide open and are more than slightly affected with the grape fever; for there are frequent young vineyards of five or ten acres, and the price of land has steadily advanced from $40 per acre to $200 and even $225, has been paid for unincumbered clay.

AMONG THE RASPBERRIES.

BY F. R. ELLIOTT, CLEVELAND, OHIO.

We spent a day or two during the raspberry season with a friend of ours, who has a choice collection of sorts, mostly in bearing. We found him, however, pretty much decided upon liking two or three sorts, and disposed to throw all others aside. Nevertheless, we went quietly to work, tasting, and examining, and comparing; visited a dozen or more places, and got their opinions. Of the white or yellow sorts, we found nothing equal to Brinckle's Orange, the fruit

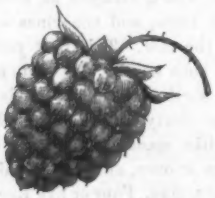

Fig. 105.—*Brinckle's Orange.*

of which was abundant upon the canes, of large size, rather long, a rich golden yellow when fully ripe, and of the richest flavor. The canes of this in our friend's grounds are regularly laid down, and covered on approach of winter. His soil is of a deep, rich, sandy loam, and thoroughly worked. We examined this sort on clay grounds, where we found it doing well; and here, as well as in a garden of light sandy soil, it had received no protection the past winter, and but poor cultivation this Spring; and yet good canes were then bearing fine fruit —not equal, of course, to those under a higher state of cultivation, but yet such as to show that the variety could bear grief.

The next best of the whites that we met with was Colonel Wilder; not as high flavored as Orange, a lighter color, but if anything the canes a little more hardy. One cultivator of it declared that he could get a good crop of it yearly, without any covering or winter protection. We doubt it.

Fig. 106.—*Col. Wilder.*

Among the red sorts, of old kinds, we found the Hornet, literally loaded with fruit; of a dark, rich red; large size; fine flavor; pretty firm; more so than most of the red; trusses with fifty to seventy-five berries; a little later in maturing than some other sorts, but universally regarded as

among the, or one of the best. Most of its growers, we also found, had been in the practice of leaving it exposed to the winter;

FIG. 107.—*Hornet.*

but where they had given it a little protection, we think the time and labor were more than twice repaid in the crop.

FASTOLFF we did not find as favorably spoken of as of olden time. One cultivator, however, regarded it yet among his best. Canes strong and stocky; partially hardy. Fruit large, abundant, tolerably firm; not sufficiently so for long carriage, however.

FRANCONIA, like the last named, we found with only a few friends, and they among the amateurs, where large and fine fruit, without much to regard to cost, was a point to gain.

KIRTLAND, for so we must name the sort now grown under this name, although the gentleman whose name it bears lays no

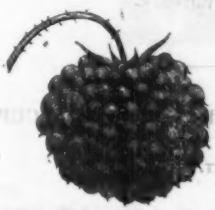

FIG. 108.—*Kirtland.*

claim to having grown it. The canes are perfectly hardy; a light yellow; free from spines. The fruit nearly or quite round; bright red; pretty firm; large grains; fruit sets abundantly, and matures well; it is not of the highest flavor nor the largest size, but, with many who have grown it in quantity, proves very profitable.

We learn, also, that the little original patch, from which Doctor Kirtland once gave away plants, now propagated under his name, yet continues in fruitful bearing, and has never had a hoe or manure applied to it.

THE ALLEN, or what is known by the market gardeners about Cleveland, Ohio, as the Red Antwerp, we found in many hands; and everywhere that they had eradicated the barren plants, it proved a profitable sort. One grower from a little piece of three rows, four rods long each, gathered and sold this year to the amount of over forty-five dollars. Where the Hornet or Kirtland can be got, however, we think the Allen will lose cast.

RED ANTWERP.—This old sort, where it had been protected last winter, we found giving fine crops of a delicious flavored fruit. It is a capital berry; but if those of

FIG. 109.—*Red Antwerp.*

hardier canes can be had, our people will not take the trouble to lay down any particular sort.

KNEVITT'S GIANT.—In only one place did we find this sort, but here the owner thought very highly of it. The canes are more hardy than any other foreign sort, except Hornet, while the fruit is firm, and of

excellent flavor. We think growers should pay more attention to this variety.

Of Vice-President French, Cushing, and others of the Brinckle origin, we found the two we have first named and figured, to have so much surpassed the others in good qualities, that they were only grown by a few amateurs.

Of new sorts, the Duhring and Clark, we have not seen in fruit. Both are represented as extra fine; another year, we hope to see their fruit.

Philadelphia is very much like Kirtland, and our description would answer for both.

Naomi we saw in fruit in two or three places, bearing abundantly: a large, fine, well-flavored fruit, and the canes, thus far, having proved perfectly hardy. Should it again prove hardy, as heretofore, it will take a first rank among raspberries for general cultivation.

Fig. 110.—*Naomi.*

Mrs. Wood is another new sort that we saw. It is not yet offered for sale, nor has it been fully described. Its habit of growth is between that of the Antwerp class and the Black Cap, and is apparently a hybrid. The wood is of a dark bluish shade; canes very strong, with many lateral branches, on which the fruit sets abundantly.

The fruit is of a dark purplish red; nearly globular; double the size of Black Cap; firm, and with a fine high flavor. We hope to have a full description and illustration of it for a future number.

Catawissa—This old double-bearing sort we have found to have stood last winter more than usually well. In some places it was the only sort this spring that retained perfect live canes. In good grounds it gives an early crop, and afterward a second crop; but to be most profitable, we are told, the canes should all be mowed off in the spring, and thus make it an autumn-bearing variety, rather than twice bearing.

The old Black Cap, as a general thing, has been superseded by the Doolittle Black Cap; and this, where the soil was deep and rich, gave enormous and profitable crops.—For many sections, and for deep, loamy, rich soils, this is undoubtedly one of the best hardy kinds in cultivation.

Of other old sorts, such as Rivers' Monthly, Ohio Everbearing, &c., &c., we learned nothing new, most growers confining themselves to well-known kinds; while at the same time they are testing on a small scale the new varieties.

PLAN FOR LAYING OUT A TEN-ACRE LOT FOR SUBURBAN OCCUPATION.

BY E. FERRAND, DETROIT.

This place has two main entrances with well-shaded drives. The lodges for the gardeners command the gates. There is an immediate access from one of those cottages to the hot beds and garden which is exposed to the full sun. The sight of this vegetable garden is entirely hidden by a belt of ornamental planting. Around the green-house and graperies are flower beds and stumps, with a nice walk around.

Rhododendrons and Kalmias can be planted on the northern and other shaded sides of the dwelling. The access is very easy to the stables and other out-buildings, with two yards and a direct access to the street. The river and lake occupy about ½ acre. There are two islands, one of which is connected to the garden by a small bridge. The space O can be cultivated into fruits of any kind or put in grass.

It has been my aim to make this a handsome place with but few roads. In fact, a simple glance at the drawing will tell more about the disposition of this place than any explanation.

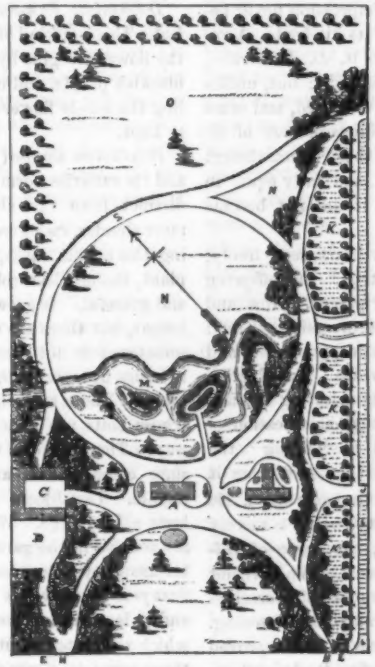

FIG. 111.—*Plan.*

REFERENCES.

A—Dwelling.
B—Greenhouses and graperies.
C—Stable, barn and interior yard.
D—Yard.
E and F—Gardeners' houses.
H—Principal entrances.
J—Entrances.
K—Vegetable garden.
L—Hot beds.
M—River, lake and islands.
N—Meadow.
O—Fields, with two rows of apple-trees.

THE DELPHINIUMS.

BY F. PARKMAN, JAMAICA PLAINS, MASS.

It is now a number of years since general attention was drawn to this fine family of hardy perennials, by the introduction of *Delphinium Formosum*. Other beautiful species and varieties had already been known, but *D. Formosum* was at once so easy of culture, so large, and so vivid in color, that it made an impression never before equalled by any of its kindred. A variety closely related to it, *D. Hendersoni*, had been introduced before it; but, unlike *Formosum*, it does not bear seed, and must be increased by the tedious process of dividing the root. For this reason, though more delicate in color, and fully equal in every point of beauty, it did not become generally known.

D. Formosum not only bears seed freely, but the seed "comes true," the offspring closely resembling the parent. Now and then one observes some diversity. Thus: in some cases the eye is deeply shaded, and in others it is pure white. An English nurseryman, by carefully selecting and isolating his seedlings through a succession of seasons, has succeeded in "fixing" the white-eyed variety, so that seed from it will commonly produce the same again. He has given his new variety, which is merely an improved *formosum*, the name of *Delphinium bicolor Grandiflorum*. We have not yet tested it sufficiently to satisfy ourselves that it deserves this formidable christening. The original *D. formosum* is an improved variety of a Siberian species, *D. cheilanthum*, which is also the ancestor of *D. Hendersoni* and *D. micans*, which very much resemble each other.

Within a year or two, another variety has been introduced, very distinct, and, without doubt, an acquisition. It has been named *Delphinium formosum cœlestinum*, and is, in fact, *formosum* with a different shade of color. While the original variety is of a deep metallic blue, the one in question is of a delicate sky blue, and it rarely fails to come true from seed. The flowers of both are very large. When grown in a rich loam, mixed with peat, of which they are very fond, we have seen them nearly two inches in width. These were flowers of young seedlings; those of the old plants are never so large.

Delphinium formosum has one serious defect. This is a kind of blight which attacks the flowers, begins by blotching them with blackish purple, and often ends by crumpling the whole flower-spike into an unsightly knot.

Delphinium sinense (the Chinese larkspur) and its varieties form another group quite distinct from the above. Its growth is more slender, its leaves finely cut, approaching the annual larkspurs; and the whole plant, though less robust, is more delicate and graceful. It grows two feet or more in height, but there are dwarf varieties which sometimes do not exceed a foot. In color, it varies from an intense metallic blue to white. There are bright sky-blue varieties whose tints are almost unrivalled in this way. There are also varieties of a purplish slate color. Some are double and semi-double. The bloom is very profuse, and lasts a long time. Where masses of blue are wanted in the garden, nothing can better answer the purpose. It will bloom the first year from seed, as will also *D. formosum*, and it is entirely free from the defect to which the latter is subject. After two or three years it commonly dies out, unless the root is divided; but it is perfectly hardy, and like *formosum*, defies the severest winter. The ancestors of both were natives of Siberia, Tartary, and Northern China. *D. Grandiflorum* is a kindred species, also a native of Siberia, and scarcely distinguishable from *sinense*.

We come now to a third section of the genus Delphinium—that of the erect robust species, of which the old Bee Larkspur may be taken as the type. This section includes

many species more or less distinct, and varieties past numbering. As most of the species hybridize very readily, and as many that are called species are not to be distinguished the one from the other, any attempt at defining them all would be a failure, but the general characteristics of the entire section are very distinct. To our thinking, the position of the Delphinium family in the world of floriculture must mainly depend on this portion of it. In hardiness, in permanency, and in freedom from disease, this section is unequalled. Its tall, erect spikes of bloom are often of the most perfect symmetry, and the flowers may be developed into the greatest beauty, both of form and color. The choice varieties of it are admirable for massing on the lawn, or planting in the middle and back of the border.

Its varieties of color are very great.—The old Bee Larkspur is of a deep blue, with a black eye, covered with short hairs, and looking like a bee nestled in the centre of the flower. It is a tall, rank-growing plant, of little value in itself, but capable of great improvement by hybridization and selection of seedlings. Next, we have a deep blue variety, with the eye pure white; then a light blue, with an eye of vivid black; then a light blue with a white eye, and a light blue with a grey eye. We have seen these last quite as large as *D. formosum*, and far surpassing it in the symmetry of their flower-spikes. Among double varieties, there are some of a deep metallic blue, others of a pure sky-blue, and others of a sky-blue, tinged with pearl and lilac. Occasionally, the central petals are striped with red and white, and they are frequently edged with a black line, which, to our thinking, is not an improvement. Many of the double varieties are good seed-bearers.

As we have raised many thousands of seedling Delphiniums within the last few years, it may be of some interest to note here some of the "sports" to which they are liable. We have frequently known a Delphinium, with an eye white and perfectly smooth, to produce a seedling with the eye black and hairy, like the old Bee Larkspur; and the offspring of this again sometimes sport back to the original white. Often a deep blue flower produces a light blue offspring, and *vice versa*, though the majority of seedlings approach the color of the parent. Some double flowers produce a considerable proportion of double offspring; while others, equally double, result almost exclusively in single flowers. We have frequently known the offspring of one plant to differ more from each other than some of those which are described by botanists as distinct species. We have now in bloom a curious example of a sport. It was raised from the seed of a double light-blue variety. The flowers are double, smaller than in the parent, and nearly pure white—the only instance we have ever seen of that color in this section of the Delphiniums. The variety bears seed, though not very freely, and we hope, ultimately, to develope something of value from it.

Now as to hybridizing. The varieties of the Bee Larkspur section hybridize freely with the section of *formosum*, producing flowers combining the characteristics of the parents, more upright and robust in growth than *formosum*; nearly as large; often quite as vivid in color; and, as far as we have observed, quite free from blight. We have never yet succeeded in hybridizing the Bee Larkspur with *sinense*; but where art has failed Nature seems to have done the work, for we have several times observed in beds of seedlings plants which, in their habit and bloom, show strong indications of being hybrids of these species. We have several of them now in bloom. In habit of growth, they approach the Bee Larkspurs, but the flower closely resembles the Chinese (*sinense*). They never bear seed, which affords another presumption that they are hybrids.

In this connection, we will mention a disaster which befell us two winters ago.—From a great number of seedlings, we had

selected about thirty which seemed worthy of names; and as the ground where they stood was to be dug up in the autumn, we placed them all in a frame for the winter. The precaution proved their ruin, for the mice got in, and devoured all but six. We are now at work to repair the mischief, and have many hundreds of seedlings which will soon be in flower. The family of the Delphiniums seems capable of a development greater than it has yet received, and we look with confidence for good results.

We have not yet done with this subject, and shall have more to say hereafter.

GRAPE MILDEW *VERSUS* THE ESSENTIAL OILS.

BY VITICOLA.

In the Horticulturist for June 1864, "Horticola" publishes several extracts from a letter of M. Neubert, a celebrated vine grower of Saxony, whom Horticola endorses as a "scientific chemist." Neubert advises the use of a solution or emulsion of essential oils (lavender and rosemary) in water impregnated with salt and saltpetre, as a remedy, or rather as a prophylactic for mildew on the grape vine. Neubert being a practical man, and his directions being founded, on his own experience, his recommendations are worthy of a trial, and should not be lightly treated unless the objections to them are obvious and well founded.

In a recent work upon Grape Culture, by W. C. Strong, these directions of M. Neubert are quoted with the following remarks: "He gives no reason for his solution, and we are at a loss to comprehend the benefits of rosemary and lavender. The salt and saltpetre are in such homeopathic quantities, that we cannot understand how so practical and skilful a cultivator as M. Neubert can attach so much value to it. The early and frequent dustings with sulphur must be the secret of his success.

We account for the efficiency of sulphur from the known effects of sulphurous acid gas upon vegetable and animal life. When diluted with a large proportion of atmospheric air, it is still so acrid as to produce a sense of suffocation and violent coughing. Every one has experienced the suffocating odor of friction matches. Flour of sulphur is insoluble in water, and decomposes slowly by combining with oxygen, forming sulphurous acid in the proportion of one part sulphur and two parts oxygen."

Upon reading the passage the question promptly occurred to me: Are these objections to M. Neubert's recipe well grounded? If so, there is no use in going to the expense and trouble of trying it. What light does chemistry and vegetable physiology throw upon the subject?

It is unnecessary to remind every reader of horticultural literature of the widely different circumstances under which different classes of plants flourish. Seaweeds grow in brine of such a strength as would prove instantly fatal to land plants; and even in strong solutions of the most acrid chemical salts (sulphate of copper) certain species have been known to thrive.

Now it has long been known that amidst these peculiarities of vegetable growth one of the most marked is the fatal effect of essential oils upon most plants of a fungoid character. Hence the ink manufacturer puts a few cloves in his ink to keep off mould while aromatic seeds of all kinds are not subject to mould and their vicinity prevents moulding in others with which they are packed.

In an elaborate article on this subject in the Edinburg Philosophical Journal, vol. 8, page 34, Dr. MacCullogh remarks:—"It is a remarkable confirmation of this circumstance, that Russian leather, which is perfumed with the tar of the birch tree,

is not subject to mouldiness, as must be known to all who possess books thus bound. They even prevent it from taking place in those books bound in calf near which they happen to lie.

This fact is particularly well known to Russian merchants, as they suffer bales of this article to lie in the London docks in the most careless manner, for a great length of time, knowing well that they can sustain no injury of this nature from dampness, whereas common curried leather requires to be opened cleaned and ventilated. Collectors of books will not be sorry to learn, that a few drops of any perfumed oil will ensure their libraries from this pest."

These facts are well known and they seem to me to offer a full explanation of the beneficial effects of essential oils in warding off attacks of mildew.

Salt and saltpetre are equally well known as powerful antiseptics. At first sight I should feel inclined to use stronger solutions 1 oz. of salt in 400 of water, but I would first try the proportions recommended by M. Neubert. His directions are probably founded on experiment.

While upon this subject allow me to say a few words in regard to the explanation given above of the action of sulphur upon mildew. Sulphur when exposed to the air at *ordinary temperatures* does not combine with oxygen and form sulphurous acid gas. This is a fact known to all chemists. It is universally regarded by chemists as an *element* and we have no evidence that it ever "decomposes." But it volatilizes slowly at ordinary temperatures and the higher the temperature the faster does it sublime. It is also soluble to some extent in oils and wax, and may possibly form a combination with some portions of the leaf. It probably acts as a specific poison to the fungus, and its properties, as noted above, lead us to appreciate the directions—apply it only on *dry* HOT days.

EARLY FALL TRANSPLANTING.

IT has long been a commonly received opinion that all deciduous trees should have one good hard frost exposure, before being dug and transplanted in the fall. That such frost assists in hastening maturity of the tree, we acknowledge; but that it is necessary to await frost and the falling of the foliage therefrom, before transplanting, we do *not* believe. The leaves have their part to perform, grow their growth, perform their appointed duty, and gradually fall to the ground. This falling of the leaves takes place much earlier in the season with some varieties of trees than with others. The cultivated sweet cherry commencing to drop more or less of its leaves in July, and mature nearly all of them early in September, while the Mahaleb does not mature much of its foliage until in August, and rarely drops any of it until the middle of September. The gooseberry and currant drop nearly all the foliage on old wood in August, and much of that on new wood early in September. The pear and apple rarely make any additional extent of growth after the middle of August, and most of their foliage is mature and ready to drop by the twentieth of September. The ash, birch, and many other forest trees have their main leaves all mature by the above time.

Looking at this we some fifteen years ago commenced planting out one or more of a sort of tree and plant early in the season, and continued our experiments until within the past two years, we have planted our cherries, pears and apples, as early as the 10th of September, and our currants and gooseberries the first week of that month, and have rarely lost a tree or

plant. We dig and plant in the usual manner, with or without water, as may be, but we make our shortening in pruning, either *before* the plant is dug, or as *soon as it is out of the ground.* The pruning, of course, takes off all the young and immature wood, and the ground being warm, the roots form anew without delay. One tree we examined last fall had made new roots over an inch long in two weeks from the time of planting. Lindley's Theory of Horticulture, together with general practice, make it much safest to transplant after the leaves have fallen in the ordinary maturity and extent of season, and undoubtedly such is the correct theory and practice, when trees have to be taken from a nursery, packed and shipped a distance; but where they can be removed from a part of one's own grounds or obtained from a nursery within a few miles, we believe the early transplanting to give the most vigorous growth the following year.

NOTES ON RASPBERRIES AND CURRANTS.

BY CHAS. DOWNING, NEWBURGH.

Messrs. Editors:—In the June number of the Horticulturist, you requested notes on raspberries, &c. On examining my collection numbering over forty varieties, I find among the new ones that Clarke, Hornet, Philadelphia, Northumberland, Fillbasket and Belle de Palluau are good and promising sorts, and the latter, I think, will prove a good market variety, the fruit being large, firm and of excellent flavor, and the plant vigorous and productive. The Clarke is a juicy, sweet berry; plant vigorous, very productive and one of the best for family use, but, I fear, too soft for market purposes. The Philadelphia is an American variety originated near that city, and celebrated in that locality for its hardiness and productiveness, and seems to be well suited to the light soils of New Jersey, where the finer European kinds generally fail—on Wm. Parry's grounds at Cinnaminson, and Edmund Morris' at Burlington, which I visited in picking season; it proved all that had been claimed for it as a profitable market sort. The berry is not as large nor as high-flavored as the European varieties. How it will succeed in other localities has yet to be tested. Among the best for family use are Brinckle's Orange, Franconia, Clarke, Belle de Palluau, Vice-President French and Hudson River Antwerp. For market purposes in this locality and some miles north and south of here the Hudson River Antwerp is the favorite sort, although I think Franconia, and perhaps Belle de Palluau, will prove on further trial equally as good.

There have been several new ones introduced of the Black Cap family, but they are so similar to the common and Doolittle, as not to be worth a separate notice. There is one received from Samuel Miller, of Avon, Pa., which he calls Surprise, which is a little larger, more juicy, more conic in form, and has more bloom on it. This, however, is from one year's experience, and may not be correct. There is also a new variety received from Joseph Sinton, of Angola, Erie county, New York, which is like the others in many respects except that it is entirely thornless. This promises to be an acquisition. It is claimed to be earlier and more productive; but having only fruited it the present season and from a plant received the past spring, I am not able to decide correctly. Of the Everbearing varieties, the Ohio Everbearing and Belle de Fontenay have proved the best with me.

CURRANTS.

I find this class of fruits in much confusion and incorrect. For several years I have obtained from Europe and this country and from various persons all the good kinds of any reputation; have made a pretty thorough examination of them the two past seasons, and find but few distinct enough to retain as really good.

Among the white ones, White Dutch and White Grape are the best. Transparent white is said to be a seedling, and no doubt is, but is so similar to White Grape in growth, quality and productiveness, that it is not worth while to make a new sort of it.

White Provence is distinct, many of the leaves being edged with white, it is the most vigorous of the white sorts. Fruit large, but not as productive as the two above-named ones. Attractor is distinct in foliage, being deeply cut or toothed, but the fruit is not equal in quality to White Grape. White Clinton is White Dutch. Imperial Yellow and Imperial White are White Grape.

Red Grape and Wilmot's Red Grape, if distinct from May's Victoria, I am not able to distinguish them. Fertile d'Anger's, Macrocarpa and Imperial Red are the same as Versaillaise or Cherry, and these two last are so much alike that it is often difficult to distinguish one from the other. The Versaillaise is said to be a seedling of the Cherry, and often has longer bunches, sometimes not. We sometimes think it less acid, but the difference is slight. Both are large and attractive kinds, and command double the price in market of other sorts; but are more acid and watery, and not near as rich as Red Dutch and many other red varieties. Red Provence and Gondoin Red, as I received them, are alike. They are the most vigorous of all the currants, with pale, reddish young branches. The fruit is small, acid, and worthless.

Red Dutch, May's Victoria, La Hative, Knights Large Red and Versaillaise are among the best of the red ones. Knights Early Red, Knights Sweet Red, Long-Bunched Red and Short-Bunched Red, are of the Red Dutch family, but no better. La Fertile is a vigorous grower, productive, large size, but not equal to some others in flavor.

Of the black varieties, Black English and Black Naples are the best.

In making the above statements, I wish to say that I have no private interests to serve, and have no plants for sale, but give it as my experience of the kinds as received from various sources and at several different times from the same persons; and if incorrect, I hope others of more extended experience will correct me.

NOTES ON THE JULY NUMBER.

TREES IN ASSEMBLAGES.—An admirably conceived and well written article. The writer, however, has overlooked one or two items. First: he says, "Columbus, when he landed, found no lawns or parks." True, he did not; and yet, at that time, in our western territories, now Wisconsin, &c., were, and yet are, hundreds of native lawns, dotted with their island groves of trees; and again, extensive parks, with here and there grand old oaks, amid which the timid deer is occasionally to be seen.—Again, it is not always grouping of trees that bring out the best results. Nature does her work most admirably, it is acknowledged, but she also does it with her tree planting according to the surrounding of her earth formations. Thus, her masses of scrawny, yet bold and picturesque trees, on her hill sides and rocky dells, are not found on her level, sandy, or prairie plains; and he who studies Nature to copy or improve, by giving her a hint, has a wide field for learning, and may study to good advantage. In this improving on Nature by hints, few are successful. The grouping of trees like

the Norway Larch, Lombardy Poplar, &c., of a pointed or spiral character, would not be Nature on a sandy level, where the scenery for miles was one continuation of the same character; and more and more would it be incongruous if the style of the buildings were of the Tuscan or Italian orders; but, as I said, this article is well written, and I shall be glad to see the writer in print again.

Designs in Rural Architecture.—I like this design for the section of country in which it is constructed, but he who copies may doubt its adaptation to all sections. The bold scenery of the Hudson suits well with points and gables.

Plan for Laying-Out a Three-Acre Lot.—Decidedly a good plan. The walks are gently curved, not crooked; and the whole plan, if carried out and cared for, would give satisfaction to the owner.

Hebe Pear.—Will Mr. Sumner tell us where this pear originated, and what is the habit of the tree?

The Canker Worm.—Colonel Dewey shall have a credit mark for this expose of our ignorance of the habits and destructive agents of the canker worm. As he says, the worm, while in the chrysalid state, is readily devoured by poultry; to which I will also add, poultry will destroy it when in the form of Fig. 89.

Years ago, I knew an orchard in New Haven County kept perfectly clear of canker worm by means of poultry; while, in the same season, the grand old elms of New Haven were almost leafless from its ravages.

Hints on Transplanting Evergreens.—"Never let the roots see the sun or feel the wind" is truly the maxim of government to the planter of evergreens. I can not, however, after nearly thirty years of practice, and with hundreds of thousands of plants, concede the recommendation to "plant from May to August." My experience is, that, with *all* evergreens, the *very best* time is just as they are pushing their buds in Spring. With Norway, Scotch, and Austrian Pines, September is better than July or August. In other words, if they have well ripened the season's growth they may be safely removed American Arbor Vitæ and Red Cedar do not do well, removed at any other season than Spring.

E. W. Bull on Grape-Culture.—Well, I am disposed to swallow almost anything in the way of a large story about the profits of grapes, but I must confess I give interested parties a little latitude when they talk of their own originating or procedure. This producing seven tons of grapes to the acre should first be shown by the acre, not by computing the product of one vine in a garden, and calculating the number to the acre. The experience of the last winter on the vineyards in Northern Ohio, I think, is a hint to growers that Nature must not be overtasked, many of the vineyards there, that last year produced very heavy crops, being this year almost dead, many vines entirely killed; while, as a rule, the vines that last year bore no fruit are this year growing a good crop. Is not Mr. Merrick too fast when he says the Iona "needs the highest possible cultivation?" Mr. Bull's item of compost is not regarded as a useful item at the West; or, if used, it would be considered as a "potting process," not in the line of "grape-growing made easy." Without desiring to detract from the vigor, &c., of the Concord, too well known to doubt, I only say that I have seen the Iona planted this year in strong, stiff clay, and at this time (July) show a growth fully equal to the Concord in similar positions. Do not understand by this that I claim the Iona as vigorous as Concord, but that I speak of it to show Mr. Merrick that I think him too fast in placing it as a variety needing to be petted. Mr. Bull's method of planting is too expensive for the western vineyardist, however well it may answer for New England; and his advice to save all the roots, and not to shorten them in, does not correspond with success in physiological practice.

The Original Red Beech Tree.—Thanks, thanks, Horticola, for this account.

From the history of its seed producing red beeches when taken from inside branches, and green beeches when gathered from the outside, may not our seedling fruit-tree growers learn a lesson, and where it is desirable to perpetuate the leading characters of a kind, select their fruits accordingly.

Sir Thomas Browne's Garden of Cyrus.—Occasionally, I like to read Sir Thomas, but, as a rule, two or three pages suffice. Perhaps, few authors have written better; but, then, we more require when reading the want of that "light that makes some things seen."

The Campanula.—Who does not know the Campanula, or, as the writer says, the Canterbury Bell? It is found in every flower-garden from Maine to California.—But the beauty of the Campanulas, to my mind, is in the perennials. I well remember a plant of *Campanula Pyramidalis*, some years since, at a State exhibition. It was about five feet high, in full bloom, and constantly attracted a crowd of wondrous gazers, whose knowledge of the Campanula had, up to that time, been merged in the old single blue biennial.

Inside Grape Borders.—If inside borders will not answer on a concrete bottom, why use the concrete? Take the soil, good of course; give drainage as for out of doors, and see the result.

Materials for Green-Houses.—This author is right in advocating wood.

Forcing Strawberries.—A practical detail, to be read by all gardeners.

Reuben.

MY EXPERIENCE WITH GOOSEBERRIES.

BY TYRUS.

I have been paying some little attention to the cultivation of the gooseberry, and from the results, I am a little surprised that their cultivation, as a market crop, is not more extensive.

The English or imported varieties, we know, do not succeed well, on account of liability to mildew; but our American sorts, such as Houghton, Cluster, &c., I have found to grow and bear most satisfactorily.

My soil is a poor clay, some of it quite on the brick-bat order, and unavailable for growing corn or potatoes; and yet the gooseberry grows vigorously on it, and perfects crops of good-sized berries.

A friend of mine has tried growing them on a good sandy loam, but quite unsuccessfully; and yet I find single bushes in almost every garden, evidencing their almost universal adaptability to all soils.

I plant my bushes early in the fall, having first plowed my ground as deep as possible with a heavy team and plow. I open out furrows four feet apart, and cross furrows at same distance; then plant, so that my bushes are four by four feet each way; leave the ground level until near the close of the season, or just before freezing up of winter, when I turn a furrow up toward each side of the plants, leaving them well protected from heaving of frost, and providing for whatever surface-water there may be at a distance from the plant.

I have gathered this year four quarts from a bush, and have sold at four and five dollars a bushel.

The varieties I am mostly growing are Houghton's Seedling, Cluster, Mountain Seedling, and Downing, and I appreciate their value in the order in which I have named them, and for the following reasons, which I make part of text descriptive:

Houghton's Seedling.—Bush grows vigorously, a little too slender to be just right, because when loaded with fruit it lies partly on the ground until the bushes get age. Sets its fruit profusely, and holds it

all until ripe. The fruit is oval; rather small; smooth skin, of pale, dull reddish brown, with faint green lines; tender and juicy, but not very high flavored; shows not a sign of mildew either when grown in the shade, in the sun, in wet or dry ground.

CLUSTER.—This is a little larger than Houghton, but does not set quite as abundantly. The bush is of a rather more stocky habit in growth, and more upright; a little richer and better flavored fruit, and may yet prove with me more desirable than Houghton.

MOUNTAIN SEEDLING.—The plant is a very strong grower, rather straggling and slender in its wood; too much so, for as yet it has had to have support to keep the fruit off the ground. The fruit is nearly one-half, say fully one-third, larger than Houghton; long oval; dark brownish red, with long peduncle, attaching the fruit to the wood at such distance as to make picking an easy matter; skin smooth; flesh much richer than either the above-named. My bushes of this sort are yet young. Should they grow strong enough to head back well, and set their fruit abundantly, it will prove a valuable sort because of its size.

DOWNING.—The bush is a more compact and upright stiff grower than either of the others. The fruit sets pretty well; is nearly round; pale whitish green, with the rib veins distinct. Skin smooth, thick. Flesh juicy; better than the first two; not as good as the last; and, unfortunately, with me it burns badly in the sun, so that one-half or more of the berries are valueless.—As a variety for early gathering it may be the most valuable, but for late marketing not as good as the others.

At another time, if you wish, I will write my experience with currants for marketing purposes.

STRAWBERRY AND RASPBERRY NOTES.

BY ISAAC HICKS.

THE crops of strawberries on Long Island, where they were suitably protected last winter, have been good. Mulching, we believe, pays.

One grower, who has three acres mostly Wilson, on the southern slope of a hill, has marketed over 10,000 quarts. They were well tilled, and kept in hills, and mulched, rows about two feet apart. Another grower had about six acres in bearing, mostly Russell's Prolific, every tenth row French, and allowed to run together; product near 8,000 quarts. We think that the French is too soft for market. The Garibaldi is larger, more productive, and carries better—a very important consideration to the grower. The Agriculturist, so far as we have heard, have all been allowed to increase as much as possible to obtain plants, and we think it has not had a fair trial. It should be grown in hills, under high cultivation, to bring out its good qualities. We find it valuable as a late berry; keeps a long time after it is picked; of high flavor; and in hills very productive.

Brooklyn Scarlet is beautiful; high flavor; an excellent amateur berry.

General Scott is very productive; large; not best flavor; too soft for market.

Russell is very prolific, and a good profitable berry.

Cutter is very productive; too soft for market, but excellent for home use.

Lenning's White, *very* poor bearer.

Lady Finger, or Scott's, good, but poor bearer.

Austin, too poor flavor for cultivation.

Wilson, probably the best yet for market.

Bartlett, or Boston Pine, fine, but poor bearer; the Brooklyn Scarlet resembles it in flavor, and is much better in every respect.

Triomphe de Gand, fine flavor, but generally few in number; if kept in hills, much better.

Of raspberries, we have tried a dozen or more kinds, and have abandoned all but the Brinckle's Orange, Doolittle Black Cap, and Philadelphia.

Brinckle's Orange, and all others of that class, require too much care in covering, and are not near as productive as the other two.

Doolittle is early, large, and productive but a rampant grower, and is quite thorny.

The Philadelphia raspberry has borne twice, and, for our soil, it is the best we have yet met with. It is very productive, much more so than Antwerp, Orange, Franconia, Fastolf, &c., with us. It resembles the Purple Cane in its taste, and is double the size, just as hardy, and throws up suckers from its roots like the Antwerps.

We have been in search of a good, hardy, productive raspberry, suitable for our light soil, and we have found it in the Philadelphia.

North Hempstead, L. I.

GLEANINGS.—*Continued.*

VI.

It is a strange thing how little, in general, people know about the sky. It is the part of the creation for which nature has done more for the sake of pleasing man, more for the sole and evident purpose of talking to him and teaching him, than in any other of her works, and it is just the part in which we least attend to her. There are not many of her dim works in which some more material or essential purpose than the mere pleasing of man is not answered by every part of their organization; instead of this, there is not a moment of any day of our lives when Nature is not producing scene after scene, picture after picture, glory after glory; and working still upon such exquisite and constant principles of the most perfect beauty, that it is quite certain it is all done for us, and intended for our profit, not pleasure. And every man, wherever placed, however far from other sources of interest or beauty, has this doing for him constantly. The noblest scenes of the earth can be seen and known but by few; it is not intended that man should live always in the midst of them; he injures them by his presence; he ceases to feel them if he be always with them; but the sky is for all; bright as it is, it is not

> "Too bright nor good
> For human nature's daily food."

It is fitted in all its functions for the perpetual comfort and exalting of the heart—for soothing it and purifying it of its dross and dust. Sometimes gentle, sometimes capricious, sometimes awful, never the same for two moments together, almost human in its passions, almost spiritual in its tenderness, almost divine in its affinity; its appeal to what is immortal in us is as distinct as its ministry of chastisement or of blessing to what is moral is essential. And yet we never attend to it, we never make it a subject of thought, but as it has to do with our animal sensations; we look upon all which bears witness to the intention of the Supreme, that we are to receive more from the covering vault than the light and the dew which we share with the weed and the worm, only as the succession of meaningless and motionless accidents, too common and too vain to be worthy of a moment of watchfulness, or a glance of admiration. If in our moments of utter idleness and insipidity we turn to the sky as a last resource, which of its phenomena do we speak of? One says it has been wet; and another it has been windy; and another it has been warm. Who, among the whole chattering crowd, can tell me of the forms and the precipices of the chain of tall white mountains that girded the horizon at noon yesterday? Who saw the narrow sunbeam that came out of the south, and smote upon

their summits until they melted and mouldered away in a mist of blue rain? Or the dance of the dead clouds when the sunlight left them last night, and the west wind blew them before it like withered leaves? All has passed unregretted, as unseen; or if the apathy be ever shaken off, even for an instant, it is only by what is gross, or what is extraordinary; and yet it is not in the broad and fierce manifestations of the elemental energies, not in the crash of the hail, nor the drift of the whirlwind, that the highest characters of the sublime are developed. God is not in the earthquake, nor in the fire, but in the still small voice. They are but the blunt and the low faculties of his nature, which can only be addressed through lampblack and lightning. It is in quiet and subdued passages of unobtrusive majesty, the deep, and the calm, and the perpetual; that which must be sought ere it can be seen, and loved ere it is understood; things which the angels work out for us daily, and yet vary eternally, which are never wanting, and never repeated; which are to be found always, yet each found but once; it is through these that her lessons of devotion are chiefly taught, and the blessings of beauty given.

VII.

It is well known that in Holland the tulip became, about the middle of the seventeenth century, the object of a trade unparallelled in the history of commercial speculation. From 1634 to 1637, all classes in all the great cities of Holland, became infected with the tulipomania. A single root of a particular species, called the Viceroy, was exchanged, in the true Dutch taste, for the following articles:—Two lasts of wheat, four of rye, four fat oxen, three fat swine, twelve fat sheep, two hogsheads of wine, four tuns of beer, two tuns of butter, one thousand pounds weight of cheese, a complete bed, a suit of clothes, and a silver beaker, the whole being worth 2,500 florins. These tulips were afterwards sold according to the weight of the roots. Four hundred perits, something less than a grain, of the bulb called Admiral Leifken, cost 4,400 florins; 446 perits of Admiral Vonder Eyk, 1,620 florins; 106 perits of Schilder, 1,615 florins; 200 perits of Semper Augustus, 5,500 florins; 410 perits of the Viceroy, 3,000 florins, &c. A bulb of the species called Semper Augustus, has been often sold for 2,000 florins; and it once happened that there were only two bulbs in existence, the one at Amsterdam, the other at Haarlem. One of these sold for 4,600 florins, together with a new carriage, two grey horses, and complete harness. On another occasion, a bulb was sold for twelve acres of land. So great was the rage for favorite bulbs, that they who had not ready money exchanged for them their goods—houses and lands, cattle and clothes. The trade was followed not alone by mercantile people, but also by the first noblemen, citizens of every description, mechanics, seamen, farmers, turf-diggers, chimney-sweeps, footmen maid-servants, old clothes dealers, &c.

At the commencement of the rage, everybody won, and no one lost. Some of the poorest people gained, in a few months, houses, coaches, and horses, and figured away like the first characters in the land. In every town some tavern was selected which served as an exchange, where high and low traded in flowers, and confirmed their bargains with the most sumptuous entertainments. They formed laws for themselves, and had their notaries and clerks.

These dealers in flowers were by no means desirous to get possession of them; no one thought of sending, much less of going himself, to Constantinople, to procure scarce roots, as many Europeans travel to Golconda and Visipour to obtain rare and precious stones. Tulips of all prices were in the market, and their roots were divided into small portions, known by the name of *perits*, in order that the poor as well as the rich might be admitted into the speculation; the tulip root itself was out of the question—it was a nonentity, but is furnished, like modern stocks and funds, the subject of a bargain for a time.

During the tulipomania, a speculator often offered and paid large sums for a root which he never received, and never wished to receive. Another sold roots which he never possessed or delivered. Often did a nobleman purchase from a chimney sweep tulips to the amount of 2,000 florins, and sell them at the same time to a farmer, and neither the nobleman, chimney-sweep, nor farmer had roots in their possession, or wished to possess them. Before the tulip season was over, more roots were sold and purchased, bespoke and promised to be delivered, than, in all probability, could be found in all the gardens of Holland; and when the Semper Augustus was not to be had, which happened twice, no species was perhaps oftener purchased and sold. In the space of three years, it is said, more than ten millions were expended in this trade in one single town of Holland.

The evil rose to such a pitch, that the States of Holland were under the necessity of interfering; the buyers took the alarm; the bubble, like the South Sea scheme, suddenly burst; and as in the outset all were winners, in the winding-up very few escaped without loss.

VIII.

Observers who, in short periods of time, have passed over vast tracts of land, and ascended lofty mountains, in which climates were ranged, as it were, in strata, one above another, must have been early impressed by the regularity with which vegetable forms are distributed. The results yielded by their observations furnished the rough materials for a science to which no name has yet been given. The same zones, or regions of vegetation, which, in the sixteenth century, Cardinal Bembo, when a youth, described on the declivity of Etna, were observed on Mount Ararat by Tournefort. He ingeniously compared the Alpine flora with the flora of plains situated in different latitudes, and was the first to observe the influence exercised in mountainous regions, on the distribution of plants, by the elevation of the ground above the level of the sea, and by the distance from the poles in flat countries. Menzel, in an unedited work on the flora of Japan, accidentally made use of the term "geography of plants;" and the same expression occurs in the fanciful but graceful work of Bernadin de St. Pierre, *Studies of Nature*. A scientific treatment of the subject began, however, only when the geography of plants was intimately associated with the study of the distribution of heat over the surface of the earth, and when the arrangement of vegetable forms in natural families admitted of a numerical estimate being made of the different forms which increase or decrease as we recede from the equator towards the poles, and of the relations in which, in different parts of the earth, each family stood with reference to the whole mass of phanerogamic indigenous plants of the same region.

EDITOR'S TABLE.

To Contributors and Others.—Address all Communications, for the Editorial and publishing departments, to Geo. E. & F. W. Woodward, 37 Park Row, New York.

Woodward's Annual of Architecture, Landscape Gardening, and Rural Art, for 1867, is now ready. 120 pages; 160 engravings; 12mo. Paper, 75c.; cloth, $1. Post paid by mail.

We have just published at this office the first annual number of the above work. It contains 170 original and practical designs for low-priced cottages, barns, and the different outbuildings required on country

places, together with numerous plans for laying-out small tracts of land. The designs and engravings have been prepared expressly for the work, are executed in the best manner, and printed on fine calendered paper.

We confidently recommend this Annual to all our readers, as supplying in part the great demand for "homes for the million;" and the elegant manner in which it has been prepared, together with the low price at which it is offered, warrants us in predicting for it a very large sale. The universal circulation of such a work would do much to improve public taste. There is scarcely a family in the land but are in need of the many hints it contains.

Raspberry Notes.—We have noticed a tendency during the past few years to run upon the blackberry, to the neglect of the raspberry, so far as raising fruit for market was concerned. The result is, raspberries are yearly growing scarcer and selling higher, while "plenty as blackberries" is literally true with that fruit, and growers complain of light returns in money, not berries. It is now time to change the current and revive the neglected raspberry.

For family use *Brinkle's Orange* ranks No. 1, and when better known will sell where it does not have to be carried far. Flavor excellent, size large, abundant bearer, and ripens its fruit over a long period, thus extending the raspberry season. It is only half-hardy, and should be laid down and covered with earth, or otherwise protected during the winter. The canes are strong and branching, and have the merit of not suckering freely.

Doolittle's Black Cap is a valuable variety, to say nothing about its improvement over the ordinary Black Cap. Our own opinion is that high culture of transplanted Wild Black Caps would make the "improved" in a very few years, but as the Doolittle is abundantly propagated by nurserymen—it can be increased very rapidly with no skill on the part of the grower—and is now sold at a reasonable price, it is better to buy enough to start with, which need not be over two dozen for a large family. When well established, each root or stool should yield four to six quarts of fruit in a season, so prolific are they. They are perfectly hardy, even as far north as Maine. The objection raised against them are, color, ripening nearly together, and thorny canes. By training upon a high trellis, keeping sheared or tied in, they can be conveniently managed. They incline to a lengthy growth, and after reaching the top of a six-foot trellis, may be allowed to bend over and return to the ground, affording a bearing cane both up and down. Even with this length, on rich soil, the extremity will often reach the soil and take root, thus furnishing a new plant, this being the way it propagates itself. The old root will live many years and throw up new shoots close to the bearing canes. They may be trained upon buildings or high fences. Growing in clusters, the berries can be picked rapidly, and, to our taste, are not bad either in pies, puddings, dumplings, as a sauce, or served up raw with sugar. It bears carriage to market well, and is growing in favor both with dealers and consumers.

Franconia, *Fastolff*, and *Hudson River Antwerp*, are all good, and each has its favorite among growers. The latter, being firmer, is the great market berry, but for family use we prefer either of the other two in point of flavor. They are all good bearers, of large size, and each should be protected during winter. This protection is a bugbear to some; but take them after a rain, when the canes are soft, and they may be bent down along the line of the row, beginning at one end and bending each cane toward the other end, securing it with a little earth, until all are down, then go along each side and bank up over them just enough to keep them covered during the washings of winter. To afford room for this, the rows should be four feet apart. A person will soon learn to cover them rapidly. In field culture a horse and plough will do most of the labor.

Lindley's Fastolff is reputed to be a seedling of the Fastolff, but carries more of the appearance of having sprung from a wildling. It is sufficiently hardy, as claimed, but with us does not yield fruit in quantity, size and quality to suit. We prefer the labor of covering a more prolific, larger and better sort. There are other varieties of merit, but the above are sufficient for all practical purposes.—*New York Tribune.*

Temperature of Plant and Fruit Houses.—One of the greatest errors committed by inexperienced gardeners, and those in charge of small plant or fruit houses, is in the keeping of a relative temperature day and night. As a rule, the temperature at night is always too high. Plants require rest at night, and can only have it by a reduced course of vital excitement. The heat at night should always be below the minimum of that during the day, and again, the heat during a cloudy day should not be brought up to the maximum of that on a a clear, bright, sunny day.

Hedge Plant.—For a compact and beautiful hedge-plant, there is none that has stood the test of all positions so well as the Buckthorn (*Rhamnus Catharticus*). It does not sucker; it bears the shears perfectly; it vegetates early in the spring, and holds its leaves late in fall, and, when well formed, and four to five feet high, not a thing can pass through it. The seed should be gathered and sown in the fall, in light mellow land. The following spring it will nearly all vegetate, and form plants of sufficient size for transplanting to the hedge-row the succeeding year.

The Hybridization of ferns has long been a disputed problem. But it is now claimed that it has been accomplished. The conditions, however, under which the result can be attained, are so difficult and delicate, that hybrids of ferns must be exceedingly rare, if ever found at all.

Woodward's Country Homes.—Eighth edition; eighth thousand; revised and enlarged; 12mo.; 192 pages; 150 designs and plans for country houses and outbuildings of moderate cost, with illustrated description of balloon frame. Extra binding, cloth, $1.50, post paid.

There is a singular want of appreciation for our own horticultural products among our leading cultivators. An imported flower or fruit stands a better chance of becoming popular, and being sought after by a multitude of people, than our home productions, even though they may be superior in every way. We do not mean, of course, to discourage the importation of new varieties. On the contrary, we would have our horticulturists avail themselves of every favorable opportunity to introduce superior, well-established, and new varieties of foreign productions. But at the same time, encouragement should be liberally given to our own cultivators who are laboring to improve our native fruits and flowers. We have capabilities of soil and climate, and patient culture to secure varieties superior to anything that can come from abroad.

Weeping Larch.—This most graceful as well as curious of weeping deciduous trees, originated by chance in a seed bed grown by W. Godsall, Hereford Nursery, England, about 1834.

Grape Yield.—In 1837, the *Cincinnati Gazette* recorded *six hundred and seventy-seven* gallons of pure wine as the product of eighteen thousand square feet, less than half an acre of ground. The grower was Jacob Resor, and the varieties Catawba and Cape.

In the same year, Mr. Herbemont, of Columbia, S. C., reported *five hundred and twenty-eight* gallons from one-sixth of an acre. These records we give to show some of our new beginners, who are at times a little disposed to boast, that large yields have been before their time.

GRAPES AND WINE.—Every man who has a grapevine should get a copy of Husmann's new work on the cultivation of the native grape, and manufacture of American wines. A practical book, by a practical and enthusiastic writer full of his subject, and able to impart sound and thorough instruction. Fully illustrated; 12mo.; 192 pages. Cloth, extra, $1.50, post paid.—Published at this office.

BEE DEFENDER.—Charlatan bee men occasionally astonish the wondering multitude by forming the bees in a swarm all over their heads, &c., and again removing them to the hive, without any injury from their stings.

It is related in *Addison's Indian Reminiscences*, an English work, that the use of *ocgonum* (sweet basil), bruised and rubbed over the person, prevents the bees stinging, and renders their being handled in any way without injury.

WESTERN TIMBER LANDS.—"A long and exhaustive report upon the timber question of the West was on the 2d transmitted to the House Committee on Public Lands by Judge Edmonds, Commissioner of the General Land Office, in reply to a call for information, under the resolution of Representative Donnelly, as to the expediency of aiding experiments in promoting the growth of forests on the Western Plains. Judge Edmonds states that the vast Western Plains and plateau can only be rendered habitable by planting forests, which will fertilize and moisten the soil, soften and modify the climate, and protect men, animals, and crops, from the desolating winds of those regions. The supply of timber in the Western two-thirds of the Union is shown to be very meager, while the prairie region is vast in extent, until our people have risen from 3,000,000 to 33,000.000. We have gone through and surrounded the primeval forests, and now enter upon the margin of the great treeless waste with our original store three-fourths consumed, the demand accelerated, and the consumers to increase from 33,000,000 to 50,000,000 during this century. Extend the time fifty years into the next century, and unless we commence to grow forests, we may be driven to the use of boards three inches wide, as in China at the present time. Is it not apparent that we should at once cease to needlessly destroy, and commence to produce timber. The Commissioner thinks the object cannot be accomplished by granting alternate sections of land, as the Homestead Act already gives land upon the condition of settlement. For the cost of planting and caring for infant forests, alternate sections of grants would be an inadequate consideration. He is not prepared to recommend any general system to encourage the growth of forests, but thinks one may be matured after free discussion, and when information is compiled as to the extent of natural forests, &c., which is now being prepared by the agents of this office. He closes with three suggestions: 1st. That the Homestead Act may be so amended as to oblige the planting of trees by the settlers. 2d. That Government surveyors be required to plant the seeds of trees adapted to the climate around each established corner.—3d. That grants may with propriety be made for the purpose of demonstrating the possibility and feasibility of growing forests upon the great Western plains. Such an experiment would stimulate individual enterprize in that direction, which, after all, is the only trustworthy and efficient power for so great a work, and it would furnish facts which might aid in the development of some general system."

BUDDED ROSES should be carefully examined, and where any appearance of swelling, the ties should be loosened. Do not free the tie entirely, because, if so done, often the bud will break loose. Loosen the tie and tie again. In strong growing stocks or shoots it is not yet too late to bud, but the ties of the late buds will generally prove best to be left on until spring.

GET ALL OUR NEW BOOKS.—We have published at this office a series of nine books, on architecture, agriculture, horticulture, &c.; just what everyone should have in their library; all handsomely illustrated, printed on fine paper, and bound in uniform extra bindings. In addition, we furnish from this office all other publications on the same subjects, and execute orders for purchasing and forwarding all miscellaneous books.

We send books by mail, post paid, carefully packed; and the distant buyer can thus be supplied as low and receive his books in as good order, as by a personal application. Look over our priced Catalogue, send us your order, and it will be promptly executed.

NEW LAWNS.—The month of September is again the time for forming lawns. We have prepared the ground, and seeded it in September, and obtained a good coat of grass strong and vigorous before the frosts of winter sat in. The ground should be thoroughly trenched two spades deep, for without depth of soil the roots of the grass die out under the burning heat of our summer suns. Make the soil at time of trenching rich by working in it liberal quantities of old well rotted manure, or if the ground is sandy draw upon it freely of clay loam, rake down as fast as you dig, burying all lumps that do not easily break, leaving the top perfectly fine, light and smooth to receive the seed.

Obtain at the rate of four bushels of lawn grass seed to the acre—select a perfectly still time for sowing, and then scatter one-half your seed, rake this in finely and yet lightly—go over again cross ways and sow the balance of the seed, then roll all down., by passing the roller both ways over the piece.

If the weather should prove dry, directly after seeding it will not matter, the fall rains as a general result will in all seasons bring up the seed, and cause it to make roots capable of enduring the changes of winter.

A scattering of coarse straw manure, not rotten, over the whole, will serve to protect from change of temperature in winter, but it must be raked off carefully early in April next.

THE PEACH WORM.—Should be destroyed this (September,) month. Dig away the earth from around the crown of the tree, laying bare the stem two or three inches above and below, observe if any gum oozes from any point, if so, scratch away with a sharp knife cutting all dead bark that may be around and under the gum following the dead line until you meet "the enemy" in form of a little white grub one quarter to three quarters of an inch long as he may be old or young, kill without fear of future trial by civil or military Courts, wash the wound with a plaster of common soft soap, replace the earth raising a little mound around the tree of a foot or so high. Trees carefully cleaned at this time will be found free from grub in April next when they should again be examined. If the trees are now neglected many of them will be past saving in the spring as the grub will be found to have girdled more or less of the trunk.

GRAPE-VINES in the house will now be ripening wood, and care should be taken to give freely of air. Prune away all useless wood, that is small and lateral shoots.

Vines in the open ground now require only to have some of the laterals stopped; but do not prune back severely, under the impression that sunlight is wanted to ripen the fruit. It is the foliage that makes perfect fruit; and if severely pruned away at this time, a check is given to the vine, often resulting in unripe fruit and a weakness of the vine for another year.

PEARS should be gathered as soon as the stem will separate freely from the tree by gently raising the fruit. Nearly all pears are better for being ripened in the house.

Native Wines.—Some weeks since, we received, from George Husmann, Esq., of Hermann, Missouri, a box of samples of wines of his manufucture. We had concluded, after testing samples of American wines that have been sent us for several years past, from different sources, that good wine would not be made in our country.—The climate, the particular grape, or the requisite skill in the manufacture seemed wanting to produce a palatable article; but we are happily disappointed in the product of Mr. Husmann's vineyards, some of which will bear most favorable comparison with the best wines of the Rhine, and must meet with favor among those who are good judges of the article.

Among the kinds particularly worthy of notice, are Norton's Virginia, Herbemont, Delaware and Catawba.

Do not permit any fruit to go to waste. Imperfect, wormy apples or pears, if not in quantity for cider, may be mashed in a tub, the juice pressed, and added to the vinegar barrel.

Horticultural Exhibitions.—The season for holding exhibitions, of fruits, flowers, &c., is now again with us, and of course new varieties of fruits, &c., will come forward for premiums. We beg respectfully to call the attention of committees and officers of societies to the fact, that most of our societies, devoted to the agricultural and horticultural interests, have adopted pomological rules respecting the introduction of new fruits to the tender mercies of the public, and at the same time to remind them that, in some strange unaccountable manner, we have almost yearly a list of *new first premium* sorts issued, and never afterward heard of. This season, we hope no new fruit or flower will receive special favor unless it fully meets all the requirements of pomological rules. Our lists are already overburdened, and any new candidate to public favor should have a more thorough examination even than is given to admission of members of the Bar at the West.—Let us, too, pray you have no more second-rate productions, or untried fruits, offered or sale as *first premium* to gull the public.

The Science of Government in connection with Government Institutions. —By Joseph Alden, D. D., L. L. D., late President of Jefferson College, Author of Elements of Intellectual Philosophy, &c. New York, Sheldon & Co., pp. 250, 12mo.

The author says the object of his "book is to aid the young in acquiring the knowledge necessary for the discharge of their duties as citizens of the United States." It contains knowledge which ought to be possessed by every citizen, and it is so clearly expressed as to be perfectly intelligible even to those who have not read on the subjects of which it treats. It gives first the general principles of government, then an account of the origin, formation and adoption of the Federal Constitution. Next comes the Constitution itself, by sections, each accompanied by brief, clear, and satisfactory comments; next the relation of the State Government to the National Government and the general provision of the State Constitutions; then the relation of city and corporate governments to the State Government; and lastly, the relations existing between nations, or the general principles of International Law.

It is rare that we find so much knowledge condensed within so small a space, without obscurity or dullness. The book is designed primarially as a text book, but will be found interesting and profitable to every citizen. Its wide introduction as a text book in our academies and schools would do much to prepare the rising generation to manage successfully our political institutions. If there is any that our youth should study, it is the nature of the government and its institutions whose control will soon pass into their hands. It would seem folly to study the institutions of Greece and Rome to the neglect of those of the United States.

We have now ready, a practical work on the propagation, cultivation, and management of forest trees, by Andrew S. Fuller, the popular author of the "Grape Culturist" and the "Strawberry Culturist." This work is handsomely illustrated, and conveys just the information desired by practical men who propose to plant for timber and fuel.

The book contains about 200 pages, in extra cloth binding, and uniform with the books already published by us, and sent free by mail to any address, on receipt of $1.50. We predict for it the same wide circulation, and extraordinary success, that has attended the publication of "Woodward's Country Homes," the 8th edition of which, revised and enlarged, is now ready.

Transplanting Evergreens.—We have found the middle to last of this month, September, a good time to remove evergreens. They have now completed their growth; the wood is firm, and if removed with care and the roots kept from getting dry, the warmth of the soil at this season causes them at once to form new rootlets and prepare for winter.

Unless our trees are small and removed with balls, we practice heading back of all the limbs and even the leader fully one-half to two-thirds of the growth. It matters not what the variety, all the evergreen family appear to bear this heading back without injury. In fact, in nine cases out of ten the following year's growth more than compensates. It also helps to thicken up the tree.

Rose Cuttings made this month and planted in a cold frame will form roots and come out fine plants next spring. The bed should have good, fine, rich soil at the bottom with fine, clean sand at top, then the buds of the cutting will not rot, and the roots as soon as formed, will have food in the good soil.

Clean the Ground.—All the grass or weeds around the trees in young orchards should be carefully cleaned away in the fall but avoid digging or plowing deep around them at this time. Stir and loosen the ground two inches deep, then cover four inches deep with some material for a mulch, but at no time permitting the mulch nearer than four inches of the body, or the mice may chance to girdle the trees before spring.

Mulching Strawberry Beds. — In mulching strawberry beds do not go on the principle that if a little is good, more would be better, for it is not so with practice in this particular. The mulch should be only, say one and half or two inches thick, simply to prevent the roots being injured by frosts during winter. A too deep mulch, say of six or more inches, we have known to entirely destroy the vines.

Selection of Shrubs.—One of our lady subscribers asks for a list of some of the best hardy flowering shrubs for a small garden. In selecting shrubs for small grounds, the beauty of the blossom should not alone be sought, but good foliage and fine habit of growth are desiable in continuing the beauty and show of the grounds during the whole season.

Of the many sorts now grown best desirable to have, we name: Spirea *billardii* and *prunifolia flore pleno;* Deutzia *gracilis;* Weigela *alba* and *grooweegii;* Ribes *gordoniana;* Clethea *paniculata;* Magnolia *purpurea;* Tartarian bush Honeysuckle; Venetian sumac or fringe tree; Spirea *tomentosa* and *Reevesii flore pleno;* French red and white lilacs, and the white and scarlet Japan quince.

Cuttings of the gooseberry, currant, and nearly, if not quite all the flowering shrubs, made and planted out this month in light, deep, well drained soil, will callus and often make considerable root and grow vigorously next spring.

Propagate Pansies.

Planting Bulbs.—In our practice with bulbs of all sorts, we have found the following to give us the best satisfaction. First, make our ground rich with well rotted manure, dig it two spades deep, take off the surface to the level of planting our bulb, place on the bed one inch of clean sand, in that place our bulbs covering them entirely with the sand; then add our rich soil to the requisite depth of three inches, and then spread over the whole bed some refuse mulch, such as pea or bean, haulm, etc., to a depth of three or four inches. Bulbs should be planted at various times, as those planted early in October will bloom much earlier next spring than those planted in November. We generally make three plantings, one early in October, one in the middle of the month, and a last early in November.

The practice of placing Crocus, Narcissus, etc., around and beneath the shade of large evergreens, or on the border of a shrubbery, etc., is very effective, provided the lawn is kept closely shaven and all the ground in fine order; but for small grounds, pattern beds, cut out of the turf, filled with the bulbs and afterwards with summer flowering plants, give to our eye the best effects and are the least trouble and expense.

Do not be in too great haste to gather grapes; remember that they are not ripe as soon as colored, and that the longer the fruit hangs upon the vine the richer and sweeter it becomes. Grapes, unlike most other fruits, do not ripen any after being gathered.

Young plants of verbenas should now be taken up, potted and placed for a few days in the shade to get established. Layers for winter plants, made directly into the pot by sinking the latter in the ground alongside of the main plant, and afterwards separated, are by many regarded the best.

Planters of trees in the medium Southern States will do well to remember the English walnut. These perfectly hardy and well-grown trees have been known to produce twenty or more bushels, making it a profitable fruit to grow.

Tie up and prune Dahlias that have grown too straggling, the last of this and first of next month will give the best bloom.

Chrysanthemums, if not in pots, may yet be potted and trained for early winter bloom in the family room.

Those already in pots may require shifting into larger size pots. They should be well watered, and occasionally with manure water.

Camellias should be carefully washed, top dressed and got in condition for ready removal to the house as soon as the nights become frosty.

Green House Plants of all sorts should early this month be got ready for removal to the house.

Heartt's Pippin.—In the August number of the Horticulturist, Reuben inquires if I can give some account of Heartt's Pippin. Many years since, I saw a fine large apple in Mr. Heartt's (I have forgotten his christian name) orchard at Troy N. Y., which he did not at the time know the name of, but was called by the neighbors Heartt's Pippin. I took buds for trial, which failed to grow, and sent for grafts the following spring, which, by some mistake, proved to be the apple described by F. R. Elliott in the June number of the Horticulturist, which was not correct, and only a small fruit, of second-rate quality; while the apple seen at Mr. Heartt's, was large, ripening in September, and which afterward proved to be the old English Codlin, so that there is really no distinct Heartt's Pippin.

Charles Downing.

CIRCULAR OF THE AMERICAN POMOLOGICAL SOCIETY.—*Whereas*, the American Pomological Society was ordered to be convened at St. Louis, Mo., on the fourth day of September next, for the purpose of holding its eleventh session; and whereas, the existence of cholera in several of the cities of the United States has become manifest, thereby creating more than usual precaution in regard to visiting places distant from home; therefore, in consideration of this fact, and also of the fact that there is a small crop of fruit in many parts of our country, the undersigned, by and with the advice of the Executive Committee and other leading pomologists, does hereby postpone and defer the meeting of said Society to the year A. D. 1867, when due notice will be given of its assembling in the aforesaid city of St. Louis.

MARSHALL P. WILDER, *Pres.*
JAMES VICK, *Sec.*

Messrs. EDITORS:

I promised to give the HORTICULTURIST my method of planting, in the open ground, vines started from single or double eyes, in hot-bed or propagating-house, as soon as I could be certain, from another year's experience, that in any weather—hot or cold, wet or dry—there will be no chance of failure. Last year, I transplanted between two and three thousand Delaware and Iona vines from a hot-bed to the open ground, and did not lose one per cent. By Fall, they all made large fine vines, and were, this spring, again planted in the nursery (I plant in my vineyard, and offer for sale, only two-year-old vines), and at this age, they are nearly all of them three feet high.

For two months past, I have been transplanting from my hot-beds plants of the Delaware, Iona, Diana, and Concord—several thousand of each. They have been planted in all sorts of weather. Three weeks ago, I planted two thousand Delaware and two hundred Iona. The ground was very dry at the time, and for ten days not a drop of rain fell, and there was no dew at night; everything in the fields was parched, burning up from want of rain, yet with the exception of three small plants, that I did not expect to live when I planted them, the vines are to-day all growing finely.

Yesterday morning, I transplanted four hundred Delaware that had been left too long in the bed, many of them one foot high. The thermometer showed intense heat, 98° in the shade; the plants drooped a little, but to-day look as fresh as ever, though the heat is the same as yesterday's, and the sun shines equally as bright. None of these plants have been shaded or protected in any manner.

My method of planting or transplanting is this:

1st. I throw up the ground into beds four feet wide, pulverizing the soil thoroughly. I plant three rows in a bed, one foot apart in the row. The plants taken from the sand of the propagating-bed are carried in anything that will hold water enough to cover the roots. The planter, taking a plant in one hand, with the other makes a hole in the bed deep enough to take in all of the old wood, and large enough so that the roots will not want for room.—Then, setting the plant in place, a boy pours in water, filling the hole nearly full. The planter, holding the vine in place with one hand, draws the fine soil quickly around it with the other. The water, when first turned in, floats all the little roots out to their full length; then taking up the fine soil, deposits it around them in the most perfect manner, and the vine is planted.—Care must be taken not to press down the earth around the plant, and also that not a drop of water comes to the surface, either of which will cause the soil around the plant to become hard, and the vine will die of course.

Vines planted in this manner need no protection, except from high winds; and, if the work is carefully done, and the plants not too large, they will not even stop grow-

ing. They should be carefully tied to stakes. I have, as I said before, planted several thousand within the last two months; none have been shaded or protected, and I have not lost a single vine that had fair roots when taken from the hot-bed.

I not only plant vines in this way, but everything, from cabbage and tomato plants up to evergreens six feet high. I don't wait for wet weather, or for evening, to set out tomato, cabbage, or the most delicate-flowering plants. I set them at mid-day, and in the dryest hot weather. I do not shade or protect in any way, and yet they never fail to grow.

I ordered from Rochester this spring about thirty large evergreens, together with a lot of fruit trees. They were over two weeks on the way, and on opening the boxes, I thought they were past saving.—They were all splendid trees, the evergreens being four and five feet high, but the roots of all seemed to be perfectly dry. I planted them all in this way, using a bucket of water to each tree, and to-day *every one of them are growing finely.*

I think this is the only way of thoroughly planting evergreens grown in nursery; in no other way can the soil be settled around each little fibre of the fibrous mass.

If the ladies will try this way of transplanting their flowering plants, they will never fail in making them live, and it is much the easiest way of planting. Always graduate the quantity of water by the size of the plant. Take care that the surface around the plant is covered with fine dry soil, and never press the soil down. Let the water settle it, and it will be right—*Never water after planting;* at least, not until the plant is thoroughly established.

This is the way, and the only safe way, of setting sweet potatoes. Never at planting omit water, in hot or dry weather.

Any of the readers of the Horticulturist who may try this method of transplanting or planting, will oblige me by letting me know of their success or failure.

Charles J. May.

Herbemont Vineyard, Warsaw, Illinois.
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A New Agricultural Theory.—The Texas correspondent of the New York *Tribune*, writing from Castorville, tells the following singular story about planting watermelons: "When we had stopped to feed ourselves and water our horses, about noon on the first, and about five miles from Austin, a superannuated negro man old enough to be mossy, came down to the fence, and after regarding us over the top rail for a minute, inquired if we would buy some millions (watermelons). Several of us went with him to his 'patch,' which was about half an acre in extent. His melons were the largest I had ever seen, but there was one monster that loomed up above its fellows like an elephant among oxen. Some one asked him the price of it. 'All I want is the price of the chicken, sah!" Seeing no chickins about, an explanation was asked. 'Why, you see, sah, early in de spring, before plantin' time comes I takes a young chicken, as soon as his throat gets big enough, and feeds that chicken with seven dry watermelon seeds—just seven—and just as soon as he got dem seven seeds down his throat I kills him, and sah, I plants dat dar chicken in de middle ob de patch.' 'What,' asked one of the party, 'do you mean to say that this is the way you raise melons?' 'Dat is de way I raised dat one, sah,' replied the old man, 'and I'se done dat same thing dis forty year, and long afore I was into Texas." We satisfied ourselves with some twenty smaller ones, whose parent vines had originated in a less objectionable place." Who says negroes have no ideas of their own?